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ABSTRACT

This document reports the results of the Kansas Assessment Program for reading and mathematics for 1999. The mathematics assessment is given in grades 4, 7, and 10. Over 30% of the 4th graders met the individual student standard for excellence in mathematics, with 8% of 7th graders and only 4% of 10th graders meeting the standard. Five-year trend data show sizable gains on all three subscales and the total power score in mathematics at grade 4, with more modest gains at grades 7 and 10. In reading, almost 39% of the grade 3 general education/gifted students taking the assessment met the individual student standard of excellence, and at grades 7 and 10, over 26% and 19% of students respectively met the standard of excellence. Data are presented in table form for the individual grades and different subgroups of students. Three appendixes contain building frequency distributions, a description of the assessments, and some example items. (Contains 46 tables.) (SLD)

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ED 435 646

Kansas Assessment Program: Results of 1999 Mathematics and Reading Assessments

August, 1999

Kansas State Department of Education
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Commissioner of Education

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PART 1 - OVERVIEW

Mathematics Assessment Highlights

Mathematics Highlights	For more information please see....
The results reported here are from the last administration of the current tests. New tests based on new standards will not be comparable to these results.	
• Over 30 percent of Kansas fourth graders met the individual student Standard of Excellence in mathematics. Eight percent of Grade 7 students and four percent of Grade 10 students did the same.	Table 4, page 21
• Almost 14 percent of students with disabilities met the individual student Standard of Excellence in fourth grade mathematics.	Table 5, page 22
• Average scores in a few of the buildings are equal to the building level Standard of Excellence in mathematics.	Table 3, page 19
• Five-year trend data show sizable gains on all three subscales and on the Total Power Score in mathematics at Grade 4. There are more modest gains at Grade 7 and Grade 10.	Table 1, page 17
• For the first time this year, state averages are reported in four different ways: all students, general education/gifted only, students with disabilities only, and students with limited English proficiency only.	Table 2, page 18
• There are few differences in male and female scores in mathematics until Grade 10 when males begin to outscore females by several percentage points. The exception is fourth grade mathematics, where males outscore females by over two percentage points in Communication.	Table 9, page 26
• Students with disabilities who are male outscore their female counterparts on all subscales at all grade levels.	Table 10, page 27
• Scores for males and females are generally improving at a similar rate over a five-year period at all grade levels.	Table 12, page 28
• General education/gifted students receiving free and reduced-price lunches score lower in mathematics than students who are not eligible for free or reduced-price lunches. The same pattern of achievement is evident for students with disabilities.	Table 17, page 35 Table 18, page 36

Highlights	For more information please see...
• Lunch program data show that gaps between lower and higher socioeconomic status groups are consistently widening rather than narrowing.	Table 20, page 38
• All ethnic groups are showing gains more at certain grade levels than at others. Overall, the most growth is shown by Asians. Least growth over a five-year period is shown by Hispanics at Grades 4 and 7 and by Blacks at Grade 10.	Table 16, page 33

Reading Assessment Highlights

Reading Highlights	For more information please see...
The results reported here are from the last administration of the current tests. New tests based on new standards will not be comparable to these results.	Table 21, page 41
• Grade 3 and Grade 7 students perform slightly better on Expository text than on Narrative text. Students perform considerably better on Narrative text than on Expository text at Grade 10.	
• Almost 39 percent of the Grade 3 general education/gifted students taking the reading assessment met the individual student Standard of Excellence. At Grades 7 and 10, over 26 and over 19 percent of students respectively met the Standard of Excellence.	Table 24, page 45
• Almost 21 percent of Grade 3 students with disabilities met the individual student Standard of Excellence in reading.	Table 25, page 46
• Average scores in a few of the buildings are equal to the building level Standard of Excellence in reading.	Table 23, page 43
• For the first time this year, state averages are reported in four different ways: all students, general education/gifted only, students with disabilities only, and students with limited English proficiency only.	Table 22, page 42
• Scores have remained stable at relatively high levels at all grades on both Narrative and Expository texts over a four-year and five-year period, respectively.	Table 21, page 41
• Females slightly outscore males at all grade levels and on both text types, with the exception of Grade 10 Expository. The largest difference is on tenth grade Narrative, where females outscore males by over five percentage points.	Table 29, page 51
• Students with disabilities who are male outscore their female counterparts in both text types at Grade 7 and in Grade 10 Expository.	Table 30, page 52
• Both males and females in general education/gifted programs are holding steady at relatively high levels at all grades and on both text types over a four-year period in reading.	Table 32, page 54

Highlights	For more information please see...
• Ethnic group differences for general education/gifted students are apparent at all grade levels in Narrative and Expository. Often the differences between highest and lowest scoring groups are sizable. Differences are also apparent for students with disabilities; however, the pattern of differences varies.	Table 33, page 56 Table 34, page 57
• General education/gifted students receiving free and reduced-price lunches score lower in reading than students who are not eligible for free or reduced-price lunches. The same pattern holds true for students with disabilities.	Table 37, page 61 Table 38, page 62
• Some ethnic groups are making modest gains in Narrative, Expository, or both at certain grade levels. For example, American Indians and Blacks at Grade 7 have made small to moderate gains on both text types over a four- and five-year period.	Table 36, page 59
• Lunch program data show that gaps between lower and higher socioeconomic status groups are consistently widening rather than narrowing.	Table 40, page 64

PART 2: DATA

Mathematics Assessment Data

Note: 1998 and 1999 state averages for the Mathematics Assessment are based on objective items only. Assessment scores from 1995 through 1997 have been refigured using objective items only in order to assist building staff in evaluating trend. Therefore, these refigured 1995-1997 averages will not match those in state reports from 1995-1997.

The Kansas State Board of Education has adopted revised state standards for mathematics. Future state tests will be based on the new standards. Results on the new tests will not be comparable to the results reported here.

Five Year Comparison of Performance of General Education/Gifted Students on Mathematics Skills

Table 1 summarizes scores from 1995 through 1999 for general education and gifted students on mathematics skills. Scores are reported in terms of percent correct. The Total Power Score is an average of the three subscales (Reasoning, Communication, and Problem Solving). Each subscale percent correct score is an average of student answers on multiple choice items and multiple mark items for that subscale.

One-year gains are around one percentage point on all subscales at all grade levels. Five-year gains for fourth grade range from four and one-half percentage points to approximately six percentage points. Seventh grade gains for the five-year period are between three and one-half percentage points and approximately five percentage points. Tenth grade five-year gains are smaller; they range from approximately two to two and one-half percentage points.

Table 1

Five-Year Comparison of General Education/Gifted Student Performance on Mathematics Skills

	Percent Correct Grade 4					Percent Correct Grade 7					Percent Correct Grade 10				
Subscale Area[a]	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
Problem Solving	57.07	57.90	58.90	60.55	61.48	45.02	45.13	46.77	47.49	48.72	34.03	35.08	34.01	35.09	35.94
Reasoning	50.71	52.74	54.09	54.91	56.66	38.85	39.97	40.81	41.42	42.52	35.12	35.65	35.93	36.26	37.59
Communication	60.10	61.71	63.20	63.62	64.57	57.34	58.28	59.13	60.52	62.14	47.02	47.83	47.42	48.57	49.68
Total Power Score[b]	55.96	57.45	58.73	59.69	60.90	47.07	47.79	48.90	49.81	51.13	38.72	39.52	39.12	39.97	41.07

[a] Values are mean percent of points available.

[b] Total power score is an equally weighted average of the three subscale areas.

1999 Mathematics Assessment Results Summary

Table 2 summarizes the test scores for Grades 4, 7, and 10 on the mathematics assessment. Scores are presented in four different ways in Table 2. There are averages for all students who took the assessment, including students with disabilities and limited English proficient students, averages for limited English proficient (LEP) students only, averages for students with disabilities only, and averages for general education students and gifted students only. It is the averages for general education and gifted students only which will be used for building report cards and for Quality Performance Accreditation at this time. Table 2 shows that scores on the Communications subscale are the highest scores for all groups of students at all three grade levels.

Table 2

Mathematics Assessment Results Summary

	Grade 4				Grade 7				Grade 10			
	Students with Limited English Proficiency	Students with Disabilities	General Education/ Gifted	All Students[d]	Students with Limited English Proficiency	Students with Disabilities	General Education/ Gifted	All Students[d]	Students with Limited English Proficiency	Students with Disabilities	General Education/ Gifted	All Students[d]
Number of students[a]	424	3,503	32,805	36,308	185	3,228	33,692	36,920	107	2,274	32,012	34,286
Subscale (Percent Correct)[b]												
Problem Solving	44.05	49.35	61.48	60.31	33.49	32.32	48.72	47.29	35.64	24.59	35.94	35.19
Reasoning	39.12	44.63	56.66	55.50	28.97	28.61	42.52	41.31	36.40	28.75	37.59	37.00
Communication	45.10	51.29	64.57	63.29	45.53	45.15	62.14	60.65	48.19	33.38	49.68	48.60
Total Power Score[c]	42.75	48.42	60.90	59.70	35.99	35.36	51.13	49.75	40.08	28.91	41.07	40.26

[a] Number of students at each grade level on which means are based.

[b] Values are mean percent of points available.

[c] Total power score is an equally weighted average of the three subscale area percentages.

[d] The total number of students in the "All Students" column equals the number of general education/gifted students plus the number of students with disabilities. Students with limited English proficiency may be either general education/gifted students or students with disabilities.

Five-Year Comparison of Percentage of Buildings Reaching Standards of Excellence in Mathematics

In 1994 the State Board of Education set building level Standards of Excellence on the mathematics assessment. These are **not** minimums; these are standards of excellence. The percentage of buildings meeting those Standards over a five-year period is reported in Table 3. The Standard of Excellence for each subscale and grade level, noted in parentheses, is a building mean percent correct score. Buildings are expected to progress toward this Standard.

Table 3

A Five-Year Comparison of Percentage of Buildings* Reaching Standards** of Excellence in Mathematics

	Percent of Buildings				
	1995	1996	1997	1998	1999
Grade 4					
Problem Solving (75)	2.5	2.4	4.4	7.4	8.5
Reasoning (75)	0.7	1.3	1.2	2.3	4.2
Communication (75)	3.6	5.9	6.6	7.5	11.5
Total Power Score(75)	1.6	1.8	2.8	4.1	6.8
Grade 7					
Problem Solving (80)	0.0	0.8	0.0	0.2	0.4
Reasoning (80)	0.0	0.4	0.0	0.0	0.0
Communication (80)	0.2	1.3	1.6	1.8	3.8
Total Power Score (80)	0.0	0.8	0.0	0.6	0.4
Grade 10					
Problem Solving (80)	0.0	0.3	0.0	0.0	0.0
Reasoning (80)	0.0	0.0	0.0	0.0	0.0
Communication (80)	0.0	0.5	0.0	0.3	0.0
Total Power Score (80)	0.0	0.3	0.0	0.0	0.0

* Includes general education/gifted students only.
** The building level standard is in parentheses.

Number of Students at Performance Levels in Mathematics in 1999

Student level Standards of Excellence were set by the Kansas State Board of Education in 1997. These are **not** minimums; these are standards of excellence. The State Board of Education also set other individual performance levels on the Kansas Assessments in 1997. The tables which follow report numbers and percents of students in each performance category. The numbers and percentages of students performing at those levels for the Total Power Score are also listed. The cutpoint for each level is indicated in parentheses.

The number and percentage of general education and gifted students taking the test who fall into each performance category are reported in Table 4. Although percentages are lower at Grades 7 and 10, over 30 percent of Grade 4 students reached the individual Standard of Excellence on the Total Power Score. Table 5 reports the number and percentage of students with disabilities who fall into each performance category, while Table 6 reports the same information for students with limited English proficiency. In Grade 4, almost 14 percent of students with disabilities met the Standard of Excellence.

Although the performance levels were established in 1997, they are applied to results from 1995 through 1999, for purposes of illustration. Table 7 reports a five-year comparison of the percentage of general education and gifted students reaching each performance level. The five-year trend is an increase in percentages of students at all three grade levels in the excellent category, and a decrease in the percentages of students at all three grade levels in the unsatisfactory category. Between 1998 and 1999, percentages in the bottom three categories decreased in Grade 4; percentages in the bottom two categories decreased in Grades 7 and 10.

Table 4

Number and Percentage of General Education/Gifted Students at Performance Levels in Mathematics in 1999*

	Total Power Score	
	Number of Students	Percent of Students
Grade 4		
Excellent (71)	10,782	32.9
Proficient (60)	7,297	22.2
Basic (47)	7,323	22.3
Unsatisfactory (<47)	7,403	22.6
Grade 7		
Excellent (76)	2,902	8.6
Proficient (50)	14,201	42.1
Basic (41)	6,792	20.2
Unsatisfactory (<41)	9,797	29.1
Grade 10		
Excellent (76)	1,436	4.5
Proficient (50)	6,837	21.4
Basic (36)	10,478	32.7
Unsatisfactory (<36)	13,261	41.4

* The individual level standard is in parentheses.

Table 5

Number and Percentage of Students with Disabilities at Performance Levels in Mathematics in 1999*

	Total Power Score	
	Number of Students	Percent of Students
Grade 4		
Excellent (71)	479	13.7
Proficient (60)	513	14.6
Basic (47)	790	22.6
Unsatisfactory (<47)	1721	49.1
Grade 7		
Excellent (76)	29	0.9
Proficient (50)	455	14.1
Basic (41)	539	16.7
Unsatisfactory (<41)	2205	68.3
Grade 10		
Excellent (76)	9	0.4
Proficient (50)	70	3.1
Basic (36)	470	20.7
Unsatisfactory (<36)	1725	75.9

* The individual level standard is in parentheses.

Table 6

Number and Percentage of Students with Limited English Proficiency
At Performance Levels in Mathematics in 1999*

	Total Power Score	
	Number of Students	Percent of Students
Grade 4		
Excellent (71)	26	6.1
Proficient (60)	42	9.9
Basic (47)	88	20.8
Unsatisfactory (<47)	268	63.2
Grade 7		
Excellent (76)	3	1.6
Proficient (50)	25	13.5
Basic (41)	33	17.8
Unsatisfactory (<41)	124	67.0
Grade 10		
Excellent (76)	9	8.4
Proficient (50)	20	18.7
Basic (36)	20	18.7
Unsatisfactory (<36)	58	54.2

* The individual level standard is in parentheses.

Table 7

A Five-Year Comparison of Percentage of Students* at Performance Levels** in Mathematics

	Total Power Score				
	1995***	1996***	1997	1998	1999
Grade 4					
Excellent (71)	22.3	25.8	28.4	29.8	32.9
Proficient (60)	17.9	18.8	21.6	22.5	22.2
Basic (47)	28.3	26.4	24.6	23.8	22.3
Unsatisfactory(<47)	31.5	29.0	25.4	23.9	22.6
Grade 7					
Excellent (76)	5.2	6.0	6.2	7.4	8.6
Proficient (50)	38.1	38.4	39.3	40.4	42.1
Basic (41)	23.7	21.4	21.5	20.7	20.2
Unsatisfactory(<41)	33.1	34.2	33.1	31.4	29.1
Grade 10					
Excellent (76)	2.0	3.3	2.3	3.4	4.5
Proficient (50)	19.5	20.3	17.1	19.8	21.4
Basic (36)	30.6	30.0	32.0	33.4	32.7
Unsatisfactory(<36)	47.9	46.5	48.6	43.4	41.4

* Includes general education/gifted students only.
** The individual level standard is in parentheses.
***Individual performance categories were not reported until 1997. They are figured and reported here for purposes of illustration.

1998-99 Building Rates of Change in Mathematics by Grade Level

Table 8 reports building level rates of change by grade level on the Kansas Mathematics Assessment for the two-year period 1998 to 1999. Categories may be defined as 1) increase, or a gain of more than 4 percentage points, 2) maintenance, or stability between -4 and +4 percentage points compared to 1998, and 3) decrease, or a loss of more than 4 percentage points. In Problem Solving, for example, 26 percent of fourth grade buildings gained over 4 percentage points, while 22 percent of seventh grade and 23 percent of the tenth grade buildings did the same.

This table should be interpreted with caution locally: buildings with fewer students will naturally have greater variability. Buildings with larger numbers of students will tend to have more stability in scores from year to year. Building staff should look at multiyear score trends to avoid overinterpretation of chance fluctuations.

Table 8

1998-1999 Building Rates of Change in Mathematics By Grade Level

Percent of Buildings with Rates of Change:	Reasoning	Communication	Problem Solving	Total Power Score
Grade 4 Change				
Greater than or equal to +4%	30%	24%	26%	26%
Between -4% and +4%	43%	48%	44%	47%
Greater than or equal to -4%	27%	28%	30%	27%
Grade 7 Change				
Greater than or equal to +4%	22%	24%	22%	20%
Between -4% and +4%	55%	50%	51%	56%
Greater than or equal to -4%	23%	26%	27%	24%
Grade 10 Change				
Greater than or equal to +4%	23%	24%	23%	19%
Between -4% and +4%	56%	47%	53%	59%
Greater than or equal to -4%	21%	29%	24%	22%

1999 Mathematics Performance by Gender

Table 9 shows no major differences between males and females in Problem Solving, Reasoning or on the Total Power Score in Grades 4 and 7. Males score slightly higher on the Communication subscale, particularly at Grade 4. At Grade 10 males outscore females on all subscales and on the Total Power Score. The largest differences are over three percentage points in both Problem Solving and Reasoning.

Table 10 shows that students with disabilities who are male outscore their female counterparts on all three subscales and the Total Power Score at all three grade levels in mathematics. Differences range from one percentage point in Grade 10 Reasoning to over four percentage points in Grade 4 Communication.

Table 11 reports basically the same scenario for students with limited English proficiency. Males outscore females, often by a large margin, on all subscales and the Total Power Score at all three grade levels, with the exception of Grade 7 Reasoning. Differences are moderate at Grade 4. At Grade 10 males outscore females by over eight percentage points in Problem Solving and Communication and by over seven percentage points on the Total Power Score. With the exception of Communication, differences are small at Grade 7.

Table 9

1999 Mathematics Performance of General Education/Gifted Students by Gender

	Grade 4		Grade 7		Grade 10	
	Female	Male	Female	Male	Female	Male
Number of Students[a]	16,517	16,235	17,024	16,560	16,388	15,525
Subscale Area (Percent Correct)[b]						
Problem Solving	61.22	61.75	48.54	48.95	34.35	37.64
Reasoning	56.71	56.61	42.53	42.54	36.01	39.28
Communication	63.39	65.79	61.78	62.52	48.71	50.71
Total Power Score[c]	60.44	61.38	50.95	51.34	39.69	42.55

[a] Number of students at each grade level on which means are based (includes all tested general education/gifted students).
[b] Values are mean percent of points available.
[c] Total Power Score is an equally weighted average of the three subscale area percentages.

Table 10

1999 Mathematics Performance of Students with Disabilities by Gender

	Grade 4		Grade 7		Grade 10	
	Female	Male	Female	Male	Female	Male
Number of Students[a]	1,121	2,369	1,005	2,210	698	1,570
Subscale Area (Percent Correct)[b]						
Problem Solving	47.73	50.09	30.98	32.92	23.17	25.20
Reasoning	43.64	45.13	26.84	29.37	28.04	29.06
Communication	48.55	52.61	42.77	46.23	32.30	33.82
Total Power Score[c]	46.64	49.28	33.53	36.17	27.84	29.36

[a] Number of students at each grade level on which means are based (includes all tested students with disabilities).
[b] Values are mean percent of points available.
[c] Total Power Score is an equally weighted average of the three subscale area percentages.

Table 11

1999 Mathematics Performance of Students with Limited English Proficiency by Gender

	Grade 4		Grade 7		Grade 10	
	Female	Male	Female	Male	Female	Male
Number of Students[a]	204	220	86	98	50	57
Subscale Area (Percent Correct)[b]						
Problem Solving	37.99	40.17	28.60	29.15	31.74	40.48
Reasoning	42.74	47.28	45.63	45.33	45.49	50.56
Communication	43.00	45.02	31.20	35.35	31.14	39.58
Total Power Score[c]	41.24	44.16	35.14	36.61	36.12	43.54

[a] Number of students at each grade level on which means are based (includes all tested general education/gifted students).
[b] Values are mean percent of points available.
[c] Total Power Score is an equally weighted average of the three subscale area percentages.

Five-Year Comparison of Performance of General Education/Gifted Students on Mathematics Skills by Gender

Table 12 reports comparisons over a five-year period for males and females in mathematics. Rates of growth for fourth grade males and females are very similar, except in Communication, where males show greater gains. Grade 7 males posted a greater gain than females in Communication, a slightly smaller gain than females in Reasoning and Problem Solving, and a similar gain on the Total Power Score. Females are gaining at a slightly faster rate in the areas of Reasoning and Communication at Grade 10. There is a three to six percentage point gain for both males and females on each subtest at both Grades 4 and 7 over a five-year period.

Table 12

Five-Year Comparison of Performance on Mathematics Skills by Gender

Percent Correct

	Female					Male				
	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
Grade 4										
Subscale Area[a]										
Problem Solving	56.64	57.42	58.58	60.26	61.22	57.49	58.41	59.24	60.86	61.75
Reasoning	05.77	52.73	54.24	54.85	56.71	50.67	52.76	53.94	54.99	56.61
Communication	59.71	61.47	61.97	62.37	63.39	60.50	61.97	64.47	64.93	65.79
Total Power Score[b]	55.71	57.21	58.26	59.16	60.44	56.22	57.71	59.21	60.26	61.38
Grade 7										
Subscale Area[a]										
Problem Solving	44.54	44.60	46.52	47.36	48.54	45.55	45.69	47.06	47.63	48.95
Reasoning	38.31	39.36	40.82	41.43	42.53	39.41	40.63	40.81	41.43	42.54
Communication	57.74	58.49	58.82	60.42	61.78	57.00	58.08	59.48	60.62	62.52
Total Power Score[b]	46.86	47.48	48.72	49.73	50.95	47.32	48.13	49.12	49.89	51.34
Grade 10										
Subscale Area[a]										
Problem Solving	32.73	33.63	31.89	33.21	34.35	35.36	36.57	36.21	36.99	37.64
Reasoning	32.49	33.04	34.22	34.58	36.01	37.81	38.29	37.72	38.00	39.28
Communication	45.41	46.04	46.38	47.74	48.71	48.68	49.65	48.54	49.50	50.71
Total Power Score[b]	36.87	37.57	37.50	38.51	39.69	40.61	41.50	40.82	41.50	42.55

[a] Values are mean percent of points available.
[b] Total Power Score is an equally weighted average of the three subscale areas.

1999 Performance on Mathematics Skills by Ethnic Group

Table 13 illustrates differences among ethnic groups on the Kansas Mathematics Assessment. Although differences between some ethnic groups are not large, often differences between the highest scoring group and the lowest scoring group are sizable. For example, the differences between the highest and lowest scoring groups at Grade 7 in Problem Solving is more than seventeen percentage points. At Grades 7 and 10, Asian/Pacific Islanders generally score highest, followed by Whites. American Indians and Hispanics score similarly at Grade 10, but American Indians perform a little better than Hispanics at Grade 7. Blacks score the least well of all ethnic groups at both grade levels. At Grade 4, the pattern is the similar to Grades 7, except that Whites and Asians score similarly. In all instances, numbers of Alaskan Natives are considered too small from which to draw inferences.

Table 14 reports scores of students with disabilities by ethnicity on the mathematics assessment. Again, numbers of Alaskan Natives are considered too small from which to draw inferences. In addition, very small numbers of Asian/Pacific Islanders are listed as being assessed as students with disabilities; therefore, inferences about performance of this ethnic catetgory should not be made. Otherwise, the pattern of achievement of students with disabilities disaggregated by ethnicity is similar to the pattern of achievement of general education/gifted students disaggregated by ethnicity.

Table 15 reports averages of students with limited English proficiency disaggregated by ethnicity. Numbers of students in different ethnic categories are small. Any inferences should be made with extreme caution. Where numbers are below eight, the averages are not included in this table.

Table 13

Performance of General Education/Gifted Students on Mathematics Skills by Ethnic Group

Group	Number of Students[a]	Subscale Area (Percent Correct)[b] Problem Solving	Reasoning	Communi-cation	Total Power Score[c]
Grade 4					
American Indian	373	55.54	51.86	59.14	55.51
Asian/Pacific Islander	650	63.61	60.49	66.44	63.52
Black, Not Hispanic	2,799	48.42	43.97	50.27	47.55
Hispanic	2,219	51.35	47.38	53.59	50.78
White, Not Hispanic	26,068	63.85	58.83	67.11	63.26
Other	208	56.81	52.99	61.34	57.04
Grade 7					
American Indian	443	43.00	36.98	54.79	44.92
Asian/Pacific Islander	653	53.38	47.01	65.38	55.26
Black, Not Hispanic	2,469	35.70	31.36	49.14	38.73
Hispanic	2,224	39.77	33.77	51.61	41.72
White, Not Hispanic	26,993	50.72	44.34	64.32	53.13
Other	381	43.50	37.31	57.41	46.07
Grade 10					
American Indian	348	28.51	32.52	42.77	34.60
Asian/Pacific Islander	669	39.31	38.15	51.65	43.03
Black, Not Hispanic	1,964	24.75	28.51	36.98	30.08
Hispanic	1,670	29.84	32.32	42.68	34.95
White, Not Hispanic	26,359	37.26	38.71	51.24	42.41
Other	461	32.88	36.26	45.96	38.37

[a] Number of students at each grade level on which means are based (includes all tested general education/gifted students).

[b] Values are mean percent of points available.

[c] Total Power Score is an equally weighted average of the three subscale area percentages.

Table 14

Performance of Students with Disabilities on Mathematics Skills by Ethnic Group

Group	Number of Students[a]	Subscale Area (Percent Correct)[b] Problem Solving	Reasoning	Communication	Total Power Score[c]
Grade 4					
American Indian	77	44.06	40.51	43.04	42.54
Asian/Pacific Islander	23	44.19	38.42	45.66	42.76
Black, Not Hispanic	335	41.86	36.06	42.01	39.97
Hispanic	188	42.71	37.75	41.88	40.78
White, Not Hispanic	2,801	50.99	46.40	53.36	50.21
Other	23	41.19	36.53	44.78	40.84
Grade 7					
American Indian	61	31.00	26.47	42.07	33.18
Asian/Pacific Islander	17	35.38	31.07	49.28	38.58
Black, Not Hispanic	340	27.09	22.32	37.83	29.08
Hispanic	189	30.47	25.84	42.15	32.82
White, Not Hispanic	2,524	33.15	29.71	46.44	36.43
Other	47	36.08	31.26	48.45	38.60
Grade 10					
American Indian	36	22.80	28.95	35.81	29.19
Asian/Pacific Islander	14	22.42	25.70	31.10	26.41
Black, Not Hispanic	226	21.67	27.33	27.51	25.51
Hispanic	94	22.77	28.90	33.84	28.50
White, Not Hispanic	1,837	25.13	29.03	34.16	29.44
Other	33	25.47	25.17	31.83	27.49

[a] Number of students at each grade level on which means are based (includes all tested students with disabilities).

[b] Values are mean percent of points available.

[c] Total Power Score is an equally weighted average of the three subscale area percentages.

Table 15

Performance of Students with Limited English Proficiency on Mathematics Skills by Ethnic Group

Group	Number of Students[a]	Subscale Area (Percent Correct)[b] Problem Solving	Reasoning	Communication	Total Power Score[c]
Grade 4					
American Indian	0	-	-	-	-
Asian/Pacific Islander	57	47.54	44.12	51.86	47.84
Black, Not Hispanic	3	-	-	-	-
Hispanic	343	43.47	38.12	43.89	41.83
White, Not Hispanic	19	46.45	42.66	47.45	45.52
Other	1	-	-	-	-
Grade 7					
American Indian	0	-	-	-	-
Asian/Pacific Islander	28	38.75	32.32	50.33	40.47
Black, Not Hispanic	2	-	-	-	-
Hispanic	143	32.06	28.07	44.02	34.72
White, Not Hispanic	11	36.81	28.96	51.97	39.25
Other	1	-	-	-	-
Grade 10					
American Indian	1	-	-	-	-
Asian/Pacific Islander	21	40.66	47.02	59.62	49.10
Black, Not Hispanic	0	-	-	-	-
Hispanic	79	35.82	34.62	45.85	38.76
White, Not Hispanic	5	-	-	-	-
Other	1	-	-	-	-

[a] Number of students at each grade level on which means are based (includes all students with limited English proficiency who took the standard administration of the assessment).

[b] Values are mean percent of points available.

[c] Total power score is an equally weighted average of the three subscale area percentages.

Five-Year Comparison of Performance of General Education/Gifted Students on Mathematics Skills by Ethnic Group

Table 16 shows that gains have been made by general education/gifted students within each ethnic category on all subscales and on the Total Power Score over a five-year period in Grade 4 mathematics. Most ethnic groups have similar growth rates, with the highest rates of growth appearing on the Reasoning subscale. At Grade 7, Hispanics show the slowest growth rates. Blacks show the least growth at Grade 10.

Overall, Asians show the most growth. Blacks show moderate to strong gains at Grades 4 and 7, but virtually no growth at Grade 10. Hispanics made small to moderate gains over a five-year period at all grade levels. American Indians' growth rates are similar at Grades 4 and 7, with slower growth at Grade 10. Whites show the highest gains at Grade 4, and the smallest gains at Grade 10.

Table 16

Five-Year Comparison of Performance of General Education/Gifted Students on Mathematics Skills by Ethnic Group

	American Indian					Asian/Pacific Islander					Black, Not Hispanic					Hispanic					White, Not Hispanic				
Grade 4	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
Subscale Area[a]																									
Problem Solving	51.67	52.04	52.26	55.13	55.54	58.39	64.11	61.03	63.35	63.61	44.78	45.58	45.81	46.68	48.42	48.67	49.66	50.37	52.03	51.35	58.78	59.62	60.84	62.56	63.85
Reasoning	45.92	46.64	48.34	49.80	51.86	52.35	58.38	56.89	58.42	60.49	38.13	39.78	41.44	41.43	43.97	41.99	44.53	46.56	47.08	47.38	52.46	54.50	55.89	56.83	58.83
Communication	55.75	55.91	57.14	57.76	59.14	61.17	66.31	63.56	64.78	66.44	47.10	48.21	48.43	47.74	50.27	51.70	53.81	54.08	54.49	53.59	61.85	63.51	65.36	65.91	67.11
Total Power Score[b]	51.12	51.52	52.58	54.23	55.51	57.30	62.91	60.49	62.18	63.52	43.34	44.53	45.23	45.28	47.55	47.45	49.33	50.34	51.20	50.78	57.70	59.21	60.69	61.77	63.26
Grade 7																									
Subscale Area[a]																									
Problem Solving	38.46	37.97	39.40	39.41	43.00	47.27	48.99	50.73	51.90	53.38	31.30	32.83	33.47	34.92	35.70	36.46	36.85	37.60	38.42	39.77	46.99	46.80	48.69	49.38	50.72
Reasoning	32.69	33.31	34.09	33.53	36.98	41.84	43.75	44.80	45.30	47.01	28.84	30.67	29.00	30.59	31.36	32.58	33.63	32.08	32.46	33.77	40.29	41.26	42.56	43.13	44.34
Communication	50.20	50.29	51.13	51.88	54.79	60.84	61.73	62.42	63.64	65.38	43.44	45.72	46.09	47.13	49.14	48.65	50.22	48.53	50.14	51.61	59.32	60.00	61.13	62.60	64.32
Total Power Score[b]	40.45	40.53	41.54	41.61	44.92	49.98	51.49	52.65	53.62	55.26	34.53	36.40	36.19	37.55	38.73	39.23	40.24	39.41	40.34	41.72	48.86	49.36	50.79	51.70	53.13
Grade 10																									
Subscale Area[a]																									
Problem Solving	26.51	28.04	30.05	29.77	28.51	36.11	39.39	37.36	40.01	39.31	24.97	24.66	24.61	24.71	24.75	27.14	28.10	27.30	29.47	29.84	35.29	36.42	35.18	36.20	37.26
Reasoning	29.98	30.86	31.63	32.02	32.52	35.81	37.96	38.16	39.56	38.15	27.23	26.56	27.67	28.05	28.51	30.05	31.11	30.76	31.13	32.32	36.12	36.72	36.93	37.22	38.71
Communication	41.15	40.83	42.25	41.74	42.77	47.49	49.82	50.38	52.15	51.65	36.13	35.86	36.07	35.83	36.98	39.60	41.10	40.63	41.89	42.68	48.43	49.31	48.78	50.01	51.24
Total Power Score[b]	32.55	33.23	34.64	34.51	34.60	39.80	42.39	41.96	43.90	43.03	29.44	29.02	29.45	29.53	30.08	32.26	33.44	32.90	34.17	34.95	39.95	40.81	40.30	41.15	42.41

[a] Values are mean percent of points available.

[b] Total Power Score is an equally weighted average of the three subscale areas.

1999 Mathematics Performance by Socioeconomic Status

Eligibility for free and reduced-price lunches is the proxy variable for socioeconomic status (SES) used by the Kansas State Board of Education. The local district person responsible for record keeping for school lunch status was asked to code confidentially students' school lunch groups onto the student answer sheet. Results of this disaggregation by SES are given in Table 17. Scores are listed for those receiving free lunches, reduced-priced lunches, and regular-priced lunches. For the convenience of school staff, combined averages for those receiving free or reduced-prices lunches are also reported.

Students receiving free and reduced-price lunches score lower than students who are eligible for neither free nor reduced-price lunches. Score differences become slightly smaller at Grade 10.

Table 18 reports performance of students with disabilities disaggregated by socioeconomic status. The pattern of performance is generally the same; however, differences in scores of students receiving free lunches and scores of students not eligible for either free or reduced-price lunches are much smaller, especially at Grades 7 and 10.

The pattern of performance of students with limited English proficiency disaggregated by socioeconomic status is reported in Table 19. The pattern of achievement is the same, with the exception of the Reasoning subscale, where the pattern shifts at Grades 4 and 10. Differences between the top-achieving category and the bottom-achieving category are moderate. Because of the small numbers of students, inferences must be made with caution.

Table 17

1999 Mathematics Performance of General Education/Gifted Students
by Socioeconomic Status

Lunch Program*	Number of Students	Subscale Area (Percent Correct)[b] Problem Solving	Reasoning	Communication	Total Power Score
Grade 4					
Free	7,517	52.02	47.72	54.74	51.49
Reduced	3,017	58.37	54.03	61.53	57.98
Free and Reduced	10,534	53.84	49.53	56.68	53.35
Neither	22,271	65.10	60.03	68.30	64.48
Grade 7					
Free	6,415	39.53	34.29	52.35	42.06
Reduced	2,889	44.77	38.97	58.29	47.34
Free and Reduced	9,304	41.15	35.75	54.20	43.70
Neither	24,388	51.61	45.11	65.16	53.96
Grade 10					
Free	4,120	28.96	31.75	40.90	33.87
Reduced	2,079	32.00	34.05	45.35	37.14
Free and Reduced	6,199	29.98	32.52	42.39	34.97
Neither	25,813	37.37	38.81	51.43	42.54

*Free and reduced-price lunch is the proxy variable for socioeconomic status in Kansas.

[a] Number of students at each grade level on which means are based (includes all tested general education/gifted students).

[b] Values are mean percent of points available.

[c] Total Power Score is an equally weighted average of the three subscale area percentages.

Table 18

1999 Mathematics Performance of of Students with Disabilities by Socioeconomic Status

Lunch Program*	Number of Students	Subscale Area (Percent Correct)[b] Problem Solving	Reasoning	Communication	Total Power Score[c]
Grade 4					
Free	1,220	44.18	38.91	44.78	42.62
Reduced	376	48.48	43.91	49.87	47.42
Free and Reduced	1,596	45.19	40.09	45.98	43.75
Neither	1,907	52.83	48.42	55.73	52.33
Grade 7					
Free	1,072	28.16	25.48	40.76	31.47
Reduced	336	33.93	28.24	44.28	35.49
Free and Reduced	1,408	29.54	26.14	41.60	32.43
Neither	1,820	34.47	30.53	47.89	37.63
Grade 10					
Free	604	22.43	27.87	29.88	26.72
Reduced	213	25.07	28.22	32.24	28.51
Free and Reduced	817	23.12	27.96	30.50	27.19
Neither	1,457	25.41	29.20	34.99	29.87

*Free and reduced-price lunch is the proxy variable for socioeconomic status in Kansas.

[a] Number of students at each grade level on which means are based (includes all tested students with disabilities).

[b] Values are mean percent of points available.

[c] Total Power Score is an equally weighted average of the three subscale area percentages.

Table 19

1999 Mathematics Performance of Students with Limited English Proficiency by Socioeconomic Status

Lunch Program*	Number of Students	Subscale Area (Percent Correct)[b] Problem Solving	Reasoning	Communication	Total Power Score[c]
Grade 4					
Free	333	42.69	38.56	43.37	41.54
Reduced	36	46.41	41.54	50.57	46.17
Free and Reduced	369	43.06	38.85	44.07	41.99
Neither	55	50.68	40.96	51.96	47.87
Grade 7					
Free	149	32.57	27.92	44.50	34.99
Reduced	10	36.47	28.90	45.48	36.95
Free and Reduced	159	32.81	27.98	44.56	35.12
Neither	26	37.62	35.02	51.44	41.36
Grade 10					
Free	68	33.56	35.66	47.07	38.76
Reduced	10	36.79	39.15	48.19	41.37
Free and Reduced	78	33.97	36.10	47.21	39.10
Neither	29	40.11	37.18	50.84	42.71

*Free and reduced-price lunch is the proxy variable for socioeconomic status in Kansas.

a Number of students at each grade level on which means are based (includes all students with limited English proficiency who took the standard administration of the assessment).

b Values are mean percent of points available.

c Total Power Score is an equally weighted average of the three subscale area percentages.

Five-Year Comparison of Performance of General Education/Gifted Students on Mathematics Skills by Socioeconomic Status

Table 20 shows mathematics data from 1995 to 1999 disaggregated by lunch program status. Eligibility for free and reduced-price lunches is the proxy variable for socioeconomic status (SES) used by the Kansas State Board of Education. Across all grade levels and subscales, the pattern is clear: gaps in performance between students from higher socioeconomic backgrounds and those from lower socioeconomic backgrounds is increasing rather than decreasing. In every case, scores of students receiving full-priced lunches are growing at faster rates than those of students receiving reduced-price or free lunches.

Table 20

Five-Year Comparison of Performance of General Education/Gifted Students on Mathematics Skills
by Socioeconomic Status

Lunch Program*	Subscale Areas[a]																			
	Problem Solving					Reasoning					Communication					Total Power Score[b]				
	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
Grade 4																				
Free	49.25	49.00	50.59	51.24	52.02	43.18	44.80	46.70	46.22	47.72	52.60	53.76	54.50	53.91	54.74	48.34	49.48	50.60	50.45	51.49
Reduced	54.05	55.33	55.40	57.80	58.37	47.28	50.09	51.37	52.00	54.03	57.05	59.72	59.53	60.54	61.53	52.79	55.04	55.43	56.78	57.98
Neither	59.51	60.27	62.11	63.98	65.10	53.12	55.09	56.89	58.15	60.03	62.46	64.00	66.57	67.23	68.30	58.36	59.78	61.86	63.12	64.48
Grade 7																				
Free	37.37	37.59	38.18	38.16	39.53	33.14	34.36	32.84	32.85	34.29	49.45	50.85	50.36	50.95	52.35	39.99	40.94	40.46	40.65	42.06
Reduced	42.05	41.64	42.82	44.16	44.77	36.53	37.22	38.03	38.72	38.97	55.13	55.80	55.49	57.29	58.29	44.57	44.89	45.45	46.73	47.34
Neither	46.97	46.99	49.39	50.25	51.61	40.31	41.36	43.14	43.92	45.11	59.28	60.02	61.76	63.33	65.16	48.86	49.45	51.43	52.50	53.96
Grade 10																				
Free	27.91	28.35	27.75	28.44	28.96	30.91	30.47	30.78	30.68	31.75	40.99	41.32	40.32	40.61	40.90	33.27	33.37	32.95	33.25	33.87
Reduced	30.13	31.49	30.86	30.69	32.00	32.36	32.97	33.37	32.82	34.05	43.31	44.53	44.26	44.66	45.35	35.27	36.33	36.16	36.06	37.14
Neither	35.05	36.13	35.18	36.44	37.37	35.83	36.45	36.90	37.38	38.81	48.02	48.83	48.72	50.09	51.43	39.63	40.47	40.27	41.30	42.54

* Free and reduced-price lunch is the proxy variable for socioeconomic status in Kansas.

[a] Values are mean percent of points available

[b] Total Power Score is an equally weighted average of the three subscale areas.

Reading Assessment Data

Note: 1998 and 1999 state averages for the Reading Assessment are based on objective items only. Assessment scores from 1995 through 1997 have been refigured using objective items only in order to assist building staff in evaluating trend. Therefore, these new refigured 1995-1997 averages will not match those in state reports from 1995-1997.

The Kansas State Board of Education has adopted revised state standards for mathematics. Future state tests will be based on the new standards. Results on the new tests will not be comparable to the results reported here.

Multiyear Comparison of Performance of General Education/Gifted Students on Reading Skills

Expository text selections were held constant from 1995 through 1999. Narrative text selections have been unchanged for four years. The multiyear results in Table 21 show that scores are basically stable at a relatively high level across four and five years. Except at Grade 7, gains are less than one percentage point for all grade levels on both text types.

Table 21

Multiyear Comparison of Performance of General Education/Gifted Students on Reading Skills

	Average Percent Correct Narrative[a]				Average Percent Correct Expository[a]					Average Percent Correct Reading Index Score[b]			
	1996	1997	1998	1999	1995	1996	1997	1998	1999	1996	1997	1998	1999
Grade 3	63.65	63.99	64.13	63.85	65.88	65.62	65.84	66.62	66.55	64.64	64.92	65.38	65.20
Grade 7	63.33	64.39	63.78	64.09	64.46	63.77	64.96	65.24	65.47	63.55	64.68	64.51	64.78
Grade 10	67.48	68.02	67.76	67.90	59.55	58.97	59.14	59.80	59.45	63.23	63.58	63.78	63.68

[a] Values are mean percent of points available.
[b] Reading Index Score is an equally weighted average of Narrative and Expository percentages.

Note: The Reading Index Score was not reported in 1996, but is reported now for illustration purposes.

1999 Reading Assessment Results Summary

Students in all accredited Kansas schools were tested in reading at Grades 3, 7, and 10. All students read and answered questions about a Narrative selection and an Expository selection. All multiple choice items on the Kansas Reading Assessment are multiple mark items: there may be more than one right answer. The Reading Index Score, which is an average of the scores on the two text types, is also reported in Table 22.

Scores are presented in four different ways in Table 22. There are averages for all students who took the assessment, including students with disabilities and limited English proficient students, averages for limited English proficient (LEP) students only, averages for students with disabilities only, and averages for general education students and gifted students only. It is the averages for general education and gifted students only which will be used for building report cards and for Quality Performance Accreditation at this time.

The results indicate that general education and gifted students, students with disabilities, and students with limited English proficiency score higher on the Expository selection at Grade 3 and higher on the Narrative text type at Grade 10. At Grade 7 results are mixed. General education and gifted students score slightly higher on the Expository selection, while students with disabilities and students with limited English proficiency score slightly higher on the Narrative selection.

Table 22
1999 Reading Assessment Results Summary

	Number Tested[a]				Reading Comprehension (Percent Correct)[b] Narrative				Reading Comprehension (Percent Correct)[b] Expository				Reading Index Score (Percent Correct)[c]			
Grade	Students with Limited English Proficiency	Students with Disabilities	General Education/ Gifted	All Students[d]	Students with Limited English Proficiency	Students with Disabilities	General Education/ Gifted	All Students	Students with Limited English Proficiency	Students with Disabilities	General Education/ Gifted	All Students	Students with Limited English Proficiency	Students with Disabilities	General Education/ Gifted	All Students
3	415	3,078	33,257	36,335	45.17	51.40	63.85	62.80	52.61	54.09	66.55	65.49	48.89	52.75	65.20	64.14
7	185	3,032	33,570	36,602	45.16	46.17	64.09	62.60	43.28	44.61	65.47	63.74	44.22	45.39	64.78	63.17
10	113	2,071	31,556	33,627	51.77	46.25	67.90	66.57	45.08	41.28	59.45	58.33	48.42	43.76	63.68	62.45

[a] Number of students at each grade level on which means are based.
[b] Values are mean percent of points available.
[c] Total Power Score is an equally weighted average of the three subscale area percentages.
[d] The total number of students in the "All Students" column equals the number of general education/gifted students plus the number of students with disabilities. Students with limited English proficiency may be either general education/gifted students or students with disabilities.

Multiyear Comparison of Percentage of Buildings Reaching Standards of Excellence in Reading

In 1994 the State Board of Education set building level Standards of Excellence on the reading assessment. These are **not** minimums; these are standards of excellence. The percentage of buildings meeting those Standards over a multiyear period is reported in Table 23. The Standard of Excellence for each subscale and grade level, noted in parentheses, is a building mean percent correct score. Buildings are expected to progress toward this standard.

Note that percentages of buildings meeting the building-level Standard of Excellence are not reported for 1995 for Narrative and Reading Index Score because a different Narrative selection was used at all grade levels that year.

Table 23

Multiyear Comparison of Percentage of Buildings Reaching Standard of Excellence in Reading

	Reading Index Score				
	1995	1996	1997	1998	1999
Grade 3					
Narrative (80)	--	1.7	2.8	3.5	3.1
Expository (77)	6.2	6.6	6.9	8.0	8.1
Reading Index (77)	--	3.8	6.0	5.7	5.9
Grade 7					
Narrative (84)	--	0.2	0.0	0.2	0.6
Expository (81)	2.0	1.7	2.6	3.4	2.2
Reading Index (81)	--	0.6	0.4	1.2	1.0
Grade 10					
Narrative (84)	--	0.3	0.0	0.0	0.0
Expository (81)	0.0	1.3	0.3	0.0	0.0
Reading Index (81)	--	0.0	0.3	0.0	0.0

* The individual student level standard is in parentheses.

Number of Students at Performance Levels in Reading in 1999

Student level Standards of Excellence were set by the Kansas State Board of Education in 1997. These are **not** minimums; these are standards of excellence. The State Board of Education also set other individual performance levels on the Kansas Assessments in 1997. The numbers and percentages of students performing at those levels for the Reading Index Score are also listed. The cutpoint for each level is indicated in parentheses.

The number and percentage of general education and gifted students taking the test who fall into each performance category are reported in Table 24. Almost 40 percent of Grade 4 students, over 20 percent of Grade 7 students, and almost 20 percent of Grade 10 students reached the individual Standard of Excellence on the Reading Index Score. Table 25 reports the number and percentage of students with disabilities who fall into each performance category, while Table 26 reports the same information for students with limited English proficiency. In Grade 4, over 20 percent of students with disabilities met the Standard of Excellence.

Table 27 reports of a four-year comparison of the percentage of general education and gifted students reaching each performance level. Although the percentages in the four proficiency categories are similar across years, there is a very slight trend toward upward movement in Grade 7.

Table 24

Number and Percentage of General Education/Gifted Students
at Performance Levels in Reading*

	Reading Index Score	
	Number of Students	Percent of Students
Grade 3		
Excellent (73)	12,920	38.8
Proficient (62)	7,460	22.4
Basic (53)	5,603	16.8
Unsatisfactory (<53)	7,274	21.9
Grade 7		
Excellent (77)	8,899	26.5
Proficient (62)	11,696	34.8
Basic (53)	5,288	15.8
Unsatisfactory (<53)	7,687	22.9
Grade 10		
Excellent (77)	6,102	19.3
Proficient (62)	12,566	39.8
Basic (53)	6,149	19.5
Unsatisfactory (<53)	6,739	21.4

* The individual student level standard is in parentheses.

Table 25

Number and Percentage of Students with Disabilities at Performance Levels in Reading*

	Reading Index Score	
	Number of Students	Percent of Students
Grade 3		
Excellent (73)	638	20.7
Proficient (62)	479	15.6
Basic (53)	510	16.6
Unsatisfactory (<53)	1,451	47.1
Grade 7		
Excellent (77)	148	4.9
Proficient (62)	446	14.7
Basic (53)	419	13.8
Unsatisfactory (<53)	2,019	66.6
Grade 10		
Excellent (77)	70	3.4
Proficient (62)	286	13.8
Basic (53)	340	16.4
Unsatisfactory (<53)	1,375	66.4

* The individual student level standard is in parentheses.

Table 26

Number and Percentage of Students with Limited English Proficiency at Performance Levels in Reading*

	Reading Index Score	
	Number of Students	Percent of Students
Grade 3		
Excellent (73)	47	11.3
Proficient (62)	60	14.5
Basic (53)	64	15.4
Unsatisfactory (<53)	244	58.8
Grade 7		
Excellent (77)	7	3.8
Proficient (62)	19	10.3
Basic (53)	33	17.8
Unsatisfactory (<53)	126	68.1
Grade 10		
Excellent (77)	7	6.2
Proficient (62)	25	22.1
Basic (53)	17	15.0
Unsatisfactory (<53)	64	56.6

* The individual student level standard is in parentheses.

Table 27

A Four-Year Comparison* of Percentage of General Education/Gifted Students at Performance Levels** in Reading

	Reading Index Score			
	1996	1997	1998	1999
Grade 3				
Excellent (73)	37.1	37.9	39.0	38.8
Proficient (62)	24.2	22.3	22.4	22.4
Basic (53)	16.8	18.1	17.6	16.8
Unsatisfactory (<53)	21.9	21.6	20.9	21.9
Grade 7				
Excellent (77)	25.8	26.4	25.9	26.5
Proficient (62)	32.8	34.8	34.7	34.8
Basic (53)	15.9	15.7	16.4	15.8
Unsatisfactory (<53)	25.4	23.1	23.1	22.9
Grade 10				
Excellent (77)	19.0	19.4	19.5	19.3
Proficient (62)	39.8	39.3	40.0	39.8
Basic (53)	18.5	19.6	19.3	19.5
Unsatisfactory (<53)	22.7	21.7	21.2	21.4

* Individual performance levels were not reported in 1996; however, they are calculated and reported here for illustrative purposes.

** The individual student level standard is in parentheses.

1998-99 Building Rates of Change in Reading by Grade Level

Table 28 reports building level rates of change by grade level on the Kansas Reading Assessment for the two-year period 1998 to 1999. Categories may be defined as 1) increase, or a gain of more than 4 percentage points, 2) maintenance, or stability between -4 and +4 percentage points compared to 1998, and 3) decrease, or a loss of more than 4 percentage points. In Expository, for example, 26 percent of fourth grade buildings gained over 4 percentage points, while 24 percent of seventh grade and 22 percent of the tenth grade buildings did the same. This table should be interpreted with caution locally: buildings with fewer students will naturally have greater variability. Buildings with larger numbers of students will tend to have more stability in scores from year to year. Building staff should look at multiyear score trends to avoid overinterpretation of chance fluctuations.

Table 28

1998-99 Building Rates of Change in Reading
By Grade Level

Percent of Buildings with Rates of Change:	Narrative	Expository	Reading Index Score
Grade 3			
Greater than or equal to +4%	25%	26%	23%
Between -4% and +4%	47%	47%	52%
Greater than or equal to -4%	28%	27%	25%
Grade 7			
Greater than or equal to +4%	18%	24%	19%
Between -4% and +4%	64%	56%	65%
Greater than or equal to -4%	18%	20%	16%
Grade 10			
Greater than or equal to +4%	17%	22%	15%
Between -4% and +4%	66%	49%	65%
Greater than or equal to -4%	17%	29%	20%

1999 Reading Performance by Gender

Table 29 illustrates performance of general education/gifted students disaggregated by gender on reading skills. Females outscore males at all grade levels and on both text types, with the exception of Expository at Grade 10, where males slightly outscore females. Differences are small with the exception of Grade 10 Narrative, where females outscore males by over five percentage points.

Table 30 reports performance of students with disabilities disaggregated by gender on the reading assessment. The pattern of achievement is similar to general education at Grades 4 and 10; however, the differences between groups are even smaller. At Grade 7, males outscore females by three and two percentage points respectively on Narrative and Expository text types.

Table 31 shows performance of students with limited English proficiency disaggregated by gender on the reading assessment. Again, the pattern is similar to general education at Grades 4 and 10. Differences between groups are small at Grade 4 and in Grade 10 Expository; however, the difference in Grade 10 Narrative is almost seven percentage points. Scores of males and females are very similar at Grade 7, with less than one percentage point separating averages.

Table 29

Reading Performance of General Education/Gifted Students by Gender

	Number Tested[a]	Reading Comprehension (Percent Correct)[b] Narrative	Expository	Reading Index Score (Percent Correct)[c]
Grade 3				
Female	16,855	65.16	67.61	66.39
Male	16,355	62.49	65.45	63.97
Grade 7				
Female	17,001	64.21	66.36	65.29
Male	16,474	63.97	64.57	64.27
Grade 10				
Female	16,199	70.40	59.08	64.74
Male	15,232	65.29	59.89	62.59

a Number of students at each grade level on which means are based (includes all tested general education/gifted students).

b Values are mean percent of points available.

c Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Table 30

Reading Performance of Students with Disabilities by Gender

	Number Tested[a]	Reading Comprehension (Percent Correct)[b] Narrative	Reading Comprehension (Percent Correct)[b] Expository	Reading Index Score (Percent Correct)[c]
Grade 3				
Female	996	52.14	54.44	53.29
Male	2,069	51.06	53.95	52.50
Grade 7				
Female	950	44.07	43.26	43.66
Male	2,070	47.09	45.24	46.17
Grade 10				
Female	627	48.25	40.17	44.21
Male	1,434	45.37	41.78	43.58

a Number of students at each grade level on which means are based (includes all tested students with disabilities).

b Values are mean percent of points available.

c Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Table 31

Reading Performance of Students with Limited English Proficiency by Gender

	Number Tested[a]	Reading Comprehension (Percent Correct)[b] Narrative	Reading Comprehension (Percent Correct)[b] Expository	Reading Index Score (Percent Correct)[c]
Grade 3				
Female	220	45.51	53.32	49.41
Male	195	44.79	51.79	48.29
Grade 7				
Female	93	45.32	43.01	44.17
Male	92	45.00	43.56	44.28
Grade 10				
Female	54	55.35	44.91	50.13
Male	59	48.49	45.23	46.86

a Number of students at each grade level on which means are based (includes all tested students with limited English proficiency who took the standard administration of the assessments).

b Values are mean percent of points available.

c Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Multiyear Comparison of Reading Performance of General Education/Gifted Students Skills by Gender

Table 32 shows five-year growth rates for Expository reading and four-year growth rates for Narrative reading for general education/gifted students, disaggregated by gender. Scores have basically been stable at relatively high levels over the four- or five-year period for all grade levels, with only Grade 7 males showing multiyear gains of over one percentage point on both text types.

Table 32

Multiyear Comparison of Reading Performance of General Education/Gifted Students by Gender

	Average Percent Correct Narrative[a]				Average Percent Correct Expository[a]					Average Percent Correct Reading Index[b]			
	1996	1997	1998	1999	1995	1996	1997	1998	1999	1996	1997	1998	1999
Grade 3													
Female	64.86	65.37	65.47	65.16	67.28	66.83	67.07	67.86	67.61	65.85	66.22	66.67	66.39
Male	62.40	62.58	62.76	62.49	64.45	64.38	64.59	65.35	65.45	63.39	63.59	64.06	63.97
Grade 7													
Female	63.81	64.35	64.05	64.21	65.87	65.05	65.89	66.50	66.36	64.43	65.16	65.28	65.29
Male	62.85	64.44	63.53	63.97	63.08	62.45	64.02	64.00	64.57	62.65	64.19	63.77	64.27
Grade 10													
Female	70.43	70.70	70.54	70.40	59.22	58.34	58.71	59.62	59.08	64.39	64.71	65.08	64.74
Male	64.52	65.24	64.90	65.29	59.95	59.69	59.61	59.98	59.89	62.11	62.43	62.44	62.59

[a] Values are mean percent of points available.
[b] Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Note: The Reading Index Score was not reported in 1996, but is reported now for illustrative purposes.

1999 Reading Performance by Ethnic Group

Table 33 indicates that Whites tend to score highest on both Narrative and Expository reading selections, followed by Asian/Pacific Islanders, with the exception of Grade 7 Expository where rankings are reversed. Hispanics and American Indians tend to score similarly at Grade 10; however, American Indians score higher than Hispanics at Grades 4 and 7. Blacks score lowest of the ethnic groups. Although ethnic differences between some groups are small, often differences between the highest scoring group and the lowest scoring group are sizable. For example, on the seventh grade Expository selection, the difference between the highest and lowest scoring groups is over fifteen percentage points. The number of Alaskan Natives in Kansas is not sufficient from which to draw inferences; therefore, those scores are not reported here.

Table 34 shows scores of students with disabilities disaggregated by ethnicity. Again, numbers of Alaskan Natives are considered too small from which to draw inferences. In addition, very small numbers of Asian/Pacific Islanders are listed as being assessed as students with disabilities; therefore, inferences about performance of this ethnic group should not be made. Otherwise, the pattern of achievement of students with disabilities disaggregated by ethnicity is similar to the pattern of achievement of general education/gifted students disaggregated by ethnicity. At Grade 10, students with disabilities who are American Indian score higher than all their counterparts on both Narrative and Reading Index Score and very similar to Whites on Expository.

Table 35 reports averages of students with limited English proficiency disaggregated by ethnicity. Numbers of students in different ethnic groups are small. Any inferences should be made with extreme caution. Where numbers are below eight, the averages are not included in this table.

Table 33

Reading Performance of General Education/Gifted Students by Ethnic Group

	Number Tested[a]	Reading Comprehension (Percent Correct)[b]		Reading Index Score (Percent Correct)[c]
		Narrative	Expository	
Grade 3				
American Indian	371	59.58	62.05	60.81
Asian/Pacific Islander	560	62.53	67.82	65.18
Black, Not Hispanic	2,933	50.06	55.60	52.83
Hispanic	2,329	54.55	59.03	56.79
White, Not Hispanic	26,543	66.28	68.46	67.37
Other	158	60.27	65.55	62.91
Grade 7				
American Indian	457	60.34	60.27	60.30
Asian/Pacific Islander	643	63.41	68.42	65.92
Black, Not Hispanic	2,490	54.43	52.71	53.57
Hispanic	2,158	55.36	55.52	55.44
White, Not Hispanic	26,908	65.81	67.53	66.67
Other	385	61.48	61.78	61.63
Grade 10				
American Indian	331	63.76	53.76	58.76
Asian/Pacific Islander	608	65.84	60.83	63.33
Black, Not Hispanic	1,923	60.31	49.37	54.84
Hispanic	1,565	62.36	51.54	56.95
White, Not Hispanic	26,003	68.94	60.84	64.89
Other	485	67.17	56.15	61.66

[a] Number of students at each grade level on which means are based (includes all tested general education /gifted students).

[b] Values are mean percent of points available.

[c] Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Table 34

Reading Performance of Students with Disabilities by Ethnic Group

	Number Tested[a]	Reading Comprehension (Percent Correct)[b]		Reading Index Score (Percent Correct)[c]
		Narrative	Expository	
Grade 3				
American Indian	43	41.34	46.95	44.15
Asian/Pacific Islander	21	50.79	62.50	56.65
Black, Not Hispanic	237	40.46	44.67	42.57
Hispanic	152	44.88	47.16	46.02
White, Not Hispanic	2,584	52.96	55.38	54.17
Other	10	52.22	54.38	53.30
Grade 7				
American Indian	62	44.27	43.89	44.08
Asian/Pacific Islander	18	42.78	44.05	43.41
Black, Not Hispanic	331	36.53	37.46	36.99
Hispanic	143	44.02	43.41	43.71
White, Not Hispanic	2,381	47.77	45.79	46.78
Other	43	46.40	44.52	45.46
Grade 10				
American Indian	42	51.06	42.56	46.81
Asian/Pacific Islander	14	36.11	35.27	35.69
Black, Not Hispanic	210	35.98	33.13	34.55
Hispanic	65	36.75	36.63	36.69
White, Not Hispanic	1,655	47.92	42.65	45.28
Other	34	46.24	37.13	41.69

[a] Number of students at each grade level on which means are based (includes all tested students with disabilities).

[b] Values are mean percent of points available.

[c] Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Table 35

Reading Performance of Students with Limited English Proficiency
by Ethnic Group

	Number Tested[a]	Reading Comprehension (Percent Correct)[b]		Reading Index Score (Percent Correct)[c]
		Narrative	Expository	
Grade 3				
American Indian	0	-	-	-
Asian/Pacific Islander	45	53.46	60.83	57.15
Black, Not Hispanic	9	43.21	50.69	46.95
Hispanic	333	43.83	51.26	47.54
White, Not Hispanic	21	50.79	59.52	55.16
Other	5	-	-	-
Grade 7				
American Indian	0	-	-	-
Asian/Pacific Islander	29	48.45	52.96	50.70
Black, Not Hispanic	2	-	-	-
Hispanic	145	44.21	41.23	42.72
White, Not Hispanic	8	43.75	46.43	45.09
Other	1	-	-	-
Grade 10				
American Indian	1	-	-	-
Asian/Pacific Islander	20	50.00	47.50	48.75
Black, Not Hispanic	7	-	-	-
Hispanic	76	50.88	44.08	47.48
White, Not Hispanic	6	-	-	-
Other	3	-	-	-

[a] Number of students at each grade level on which means are based (includes all tested students with limited English proficiency who took the standard administration of the assessment).

[b] Values are mean percent of points available.

[c] Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Multiyear Comparison of Reading Performance of General Education/Gifted Students

Table 36 reports reading change data for general education/gifted students disaggreged by ethnicity. Multiyear growth for ethnic groups is not consistent across text types and grade levels. American Indians have multiyear gains at Grades 3 and 7, while holding relatively steady at Grade 10. Asians' scores are basically stable with the exception of a three point increase in Grade 7 Expository. Blacks' scores have increased in Grade 3 Expository, in both text types at Grade 7, and in Grade 10 Narrative. Their scores are relatively stable at Grade 10 Expository, while losing ground at Grade 4 Narrative. Hispanic scores held steady at Grade 3 Expository, grew only in Grade 7 Expository, and decreased on all other indices. Scores of Whites are stable at Grade 10 and up less than one percentage point on both text types at Grades 3 and 7.

Table 36

Multiyear Comparison of Performance of General Education/Gifted Students on Reading Skills by Ethnic Group

	Narrative[a]				Expository[a]					Reading Index[b]			
	1996	1997	1998	1999	1995	1996	1997	1998	1999	1996	1997	1998	1999
Grade 3													
American Indian	57.95	61.37	58.55	59.58	59.35	61.52	61.32	61.02	62.05	59.74	61.35	59.79	60.81
Asian/Pacific Islander	61.94	64.65	61.53	62.53	68.25	66.10	69.10	66.54	67.82	64.02	66.87	64.04	65.18
Black, Not Hispanic	51.59	51.15	51.48	50.06	53.98	54.02	55.17	55.90	55.60	52.80	53.16	53.69	52.83
Hispanic	55.89	56.05	56.74	54.55	58.86	59.30	59.38	60.50	59.03	57.59	57.72	58.62	56.79
White, Not Hispanic	65.30	65.82	66.09	66.28	67.57	67.13	67.32	68.28	68.46	66.22	66.57	67.18	67.37
Grade 7													
American Indian	57.36	58.13	58.01	60.34	55.80	54.31	56.91	56.23	60.27	55.83	57.52	57.12	60.30
Asian/Pacific Islander	62.85	62.64	60.61	63.41	65.40	65.09	67.33	66.09	68.42	63.97	64.98	63.35	65.92
Black, Not Hispanic	52.40	53.53	53.73	54.43	48.83	49.67	50.98	52.20	52.71	51.04	52.25	52.97	53.57
Hispanic	57.05	56.33	56.17	55.36	54.25	55.68	55.45	56.21	55.52	56.36	55.89	56.19	55.44
White, Not Hispanic	64.83	66.05	65.43	65.81	66.73	65.75	66.98	67.28	67.53	65.29	66.52	66.35	66.67
Grade 10													
American Indian	64.61	66.20	64.73	63.76	53.50	52.94	53.85	53.03	53.76	58.77	60.02	58.88	58.76
Asian/Pacific Islander	65.60	64.38	64.54	65.84	61.15	62.19	59.15	60.85	60.83	63.90	61.76	62.69	63.33
Black, Not Hispanic	58.48	60.90	58.67	60.31	49.85	48.48	48.25	48.68	49.37	53.48	54.57	53.67	54.84
Hispanic	63.45	63.75	62.92	62.36	52.85	52.67	53.56	53.03	51.54	58.06	58.65	57.98	56.95
White, Not Hispanic	68.60	68.98	68.92	68.94	60.79	60.30	60.50	61.20	60.84	64.45	64.74	65.06	64.89

[a] Values are mean percent of points available

[b] Reading Index Score is an equally weighted average of the Narrative and Expository percentages

Note: The Reading Index Score was not reported in 1996, but is reported now for illustrative purposes.

1999 Reading Performance by Socioeconomic Status

Eligibility for free and reduced-price lunches is the proxy variable for socioeconomic status (SES) used by the Kansas State Board of Education. The local district person responsible for record keeping for school lunch status was asked to code confidentially students' school lunch groups onto the student answer sheet. Results of this disaggregation by SES are given in Table 37. Scores are listed for those receiving free lunches, reduced-price lunches, and regular-priced lunches. For the convenience of school staff, combined averages for those receiving free or reduced-price lunches are also reported.

Students receiving free and reduced-price lunches score lower than students who are eligible for neither free or reduced-price lunches. Score differences become slightly smaller at Grade 10.

Table 38 reports performance of students with disabilities disaggregated by socioeconomic status. The pattern of performance is generally the same; however, differences in scores of students receiving free lunches and scores of students not eligible for either free or reduced-price lunches are smaller at Grades 7 and 10.

The pattern of performance of students with limited English proficiency disaggregated by socioeconomic status is reported in Table 39. The pattern of achievement is the same as that of general education/gifted and students with disabilities only at Grade 10. These results should be interpreted with caution because of small sample sizes.

Table 37

Reading Performance of General Education/Gifted Students by Socioeconomic Status

Lunch Program*	Number Tested[a]	Reading Comprehension (Percent Correct)[b] Narrative	Reading Comprehension (Percent Correct)[b] Expository	Reading Index (Percent Correct)[c]
Grade 3				
Free	7,927	55.31	59.28	57.29
Reduced	3,112	61.11	64.19	62.65
Free and Reduced	11,039	56.94	60.66	58.80
Neither	22,218	67.28	69.47	68.38
Grade 7				
Free	6,254	56.68	55.22	55.95
Reduced	2,869	62.00	62.00	62.00
Free and Reduced	9,123	58.35	57.35	57.85
Neither	24,447	66.23	68.49	67.36
Grade 10				
Free	3,964	61.86	51.48	56.67
Reduced	1,988	65.66	56.41	61.04
Free and Reduced	5,952	63.13	53.13	58.13
Neither	25,604	69.01	60.92	64.97

* Free and reduced-price lunch is the proxy variable for socioeconomic status in Kansas.

[a] Number of students at each grade level on which means are based (includes all tested general education/gifted students).

[b] Values are mean percent of points available.

[c] Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Table 38

Reading Performance of Students with Disabilities by Socioeconomic Status

Lunch Program*	Number Tested[a]	Reading Comprehension (Percent Correct)[b]		Reading Index (Percent Correct)[c]
		Narrative	Expository	
Grade 3				
Free	1,006	44.28	47.49	45.89
Reduced	342	52.52	54.99	53.75
Free and Reduced	1,348	46.37	49.39	47.88
Neither	1,730	55.32	57.75	56.54
Grade 7				
Free	996	41.27	39.66	40.46
Reduced	322	45.67	43.35	44.51
Free and Reduced	1,318	42.34	40.56	41.45
Neither	1,714	49.12	47.73	48.43
Grade 10				
Free	567	40.82	37.32	39.07
Reduced	187	45.72	41.74	43.73
Free and Reduced	754	42.04	38.42	40.22
Neither	1,317	48.66	42.92	45.79

* Free and reduced-price lunch is the proxy variable for socioeconomic status in Kansas.

[a] Number of students at each grade level on which means are based (includes all tested students with disabilities).
[b] Values are mean percent of points available.
[c] Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Table 39

Reading Performance of Students with Limited English Proficiency by Socioeconomic Status

Lunch Program*	Number Tested[a]	Reading Comprehension (Percent Correct)[b] Narrative	Reading Comprehension (Percent Correct)[b] Expository	Reading Index (Percent Correct)[c]
Grade 3				
Free	331	43.61	52.00	47.80
Reduced	42	55.42	55.80	55.61
Free and Reduced	373	44.94	52.43	48.68
Neither	42	47.22	54.17	50.69
Grade 7				
Free	153	43.73	42.81	43.27
Reduced	11	61.81	55.84	58.83
Free and Reduced	164	44.94	43.68	44.31
Neither	21	46.90	40.14	43.52
Grade 10				
Free	65	43.85	41.06	42.45
Reduced	12	53.70	45.31	49.51
Free and Reduced	77	45.38	41.72	43.55
Neither	36	65.43	52.26	58.84

* Free and reduced-price lunch is the proxy variable for socioeconomic status in Kansas.

[a] Number of students at each grade level on which means are based (includes all tested students with Limited English Proficiency who took the standard administration of the assessment).

[b] Values are mean percent of points available.

[c] Reading Index Score is an equally weighted average of the Narrative and Expository percentages.

Multiyear Comparison of Reading Performance of General Education/Gifted Students

Comparison data across years for socioeconomic status is reported in Table 40. Across all grade levels and subscales, the pattern is clear: gaps in performance between students from higher socioeconomic backgrounds and those from lower socioeconomic backgrounds is increasing, rather than decreasing. In every case, students receiving full-priced lunches are growing at faster rates than students receiving reduced-price or free lunches.

Table 40

Multiyear Comparison of Reading Performance of General Education/Gifted Students by Socioeconomic Status

Lunch Program*	Average Percent Correct Narrative[a]				Average Percent Correct Expository[a]					Average Percent Correct Reading Index Score[b]			
	1996	1997	1998	1999	1995	1996	1997	1998	1999	1996	1997	1998	1999
Grade 3													
Free	57.22	56.49	56.11	55.31	59.56	59.11	58.76	59.53	59.28	58.16	57.62	57.82	57.29
Reduced	62.24	61.95	61.87	61.11	64.23	63.56	63.79	64.36	64.19	62.90	62.87	63.12	62.65
Neither	65.50	66.99	67.23	67.28	67.91	67.55	68.69	69.40	69.47	66.52	67.84	68.31	68.38
Grade 7													
Free	57.99	57.40	56.78	56.68	54.94	55.59	55.55	55.73	55.22	56.79	56.47	56.25	55.95
Reduced	62.06	61.90	62.25	62.00	61.50	61.19	60.84	62.23	62.00	61.63	61.37	62.24	62.00
Neither	64.53	66.47	65.74	66.23	66.81	65.67	67.85	68.00	68.49	65.10	67.16	66.87	67.36
Grade 10													
Free	62.17	62.96	61.49	61.86	52.39	52.31	52.06	52.09	51.48	57.24	57.51	56.79	56.67
Reduced	65.26	65.48	65.09	65.66	56.38	56.26	56.00	56.45	56.41	60.76	60.74	60.77	61.04
Neither	68.25	68.98	68.94	69.01	60.63	59.93	60.46	61.25	60.92	64.09	64.72	65.10	64.97

* Free and reduced-price lunch is the proxy variable for socioeconomic status in Kansas.

[a] Values are mean percent of points available.

[b] Reading Index Score is an equally weighted average of Narrative and Expository percentages.

Note: The Reading Index Score was not reported in 1996, but is reported now for illustrative purposes.

Appendix A

Building Frequency Distributions

Table A1
Mathematics Assessment Scores - Grade 4 Building Frequency Distributions

Percent Correct Score	Number of Buildings: Reasoning	Communication	Problem Solving	Total Power Score	
≥ 75	43	110	82	67	Standard of Excellence
74	9	30	16	16	
73	9	29	24	15	
72	11	37	27	16	
71	14	35	17	15	
70	14	37	21	28	
69	18	35	20	26	
68	21	29	28	25	
67	18	42	33	29	
66	13	48	29	28	
65	21	34	34	39	
64	15	52	35	35	
63	27	42	40	37	
62	32	37	41	36	
61	31	26	30	46	
60	21	28	28	42	
59	30	37	37	37	
58	42	30	37	30	
57	34	25	27	32	
56	42	20	42	39	
55	23	17	22	29	
54	32	16	21	22	
53	39	14	16	30	
52	39	9	27	32	
51	25	7	22	28	
50	33	10	16	8	
49	30	12	21	19	
48	27	7	21	10	
47	21	8	14	13	
46	23	6	15	18	
45	12	4	10	8	
44	21	6	4	6	
43	21	3	5	5	
42	15	2	5	6	
41	14	0	5	1	
40	13	1	8	6	
39	5	4	5	4	
38	5	1	3	1	
37	9	1	2	3	
36	5	0	1	6	
35	5	3	1	1	
34	8	2	1	1	
33	0	1	0	2	
≤ 32	7	0	4	0	
Average of Building Means*	56.10	64.49	61.05	60.54	
Standard Deviation of Building Means*	10.51	9.16	10.17	9.51	

* These means and standard deviations are figured on the distribution of rounded building means. State averages in other sections of this report are figured on the distribution of student scores.

Table A2
Mathematics Assessment Scores - Grade 7 Building Frequency Distributions

Percent Correct Score	Number of Buildings: Reasoning	Communication	Problem Solving	Total Power Score	
≥ 80	0	21	2	2	Standard of Excellence
79	0	7	0	0	
78	0	4	0	0	
77	1	7	0	0	
76	0	6	0	0	
75	1	7	0	0	
74	0	7	1	0	
73	0	17	0	2	
72	1	11	2	2	
71	0	14	1	4	
70	0	9	0	1	
69	0	12	1	5	
68	2	23	2	3	
67	1	19	1	4	
66	0	12	6	4	
65	2	18	5	4	
64	0	18	4	10	
63	3	21	5	5	
62	1	30	7	9	
61	2	21	13	13	
60	2	19	7	11	
59	4	27	9	21	
58	5	16	10	17	
57	5	19	13	14	
56	5	13	18	13	
55	3	18	11	26	
54	7	11	21	24	
53	9	12	18	18	
52	17	12	22	24	
51	15	13	32	28	
50	10	8	27	28	
49	27	10	28	28	
48	17	5	25	22	
47	18	10	27	24	
46	18	1	17	20	
45	24	7	21	14	
44	23	7	31	24	
43	25	2	18	9	
42	34	1	17	11	
41	30	1	8	9	
40	16	2	6	14	
39	22	2	10	6	
38	27	1	12	9	
37	20	1	8	2	
36	13	0	7	3	
35	20	0	6	1	
34	16	0	3	4	
33	10	0	4	3	
≤ 32	47	1	17	8	
Average of Building Means*	42.94	60.06	48.98	51.34	
Standard Deviation of Building Means*	8.48	9.86	9.02	8.61	

* These means and standard deviations are figured on the distribution of rounded building means. State averages in other sections of this report are figured on the distribution of student scores.

Table A3
Mathematics Assessment Scores - Grade 10 Building Frequency Distributions

Percent Correct Score	Number of Buildings: Reasoning	Communication	Problem Solving	Total Power Score	
≥ 80	0	0	0	0	Standard of Excellence
79	0	0	0	0	
78	0	0	0	0	
77	0	0	0	0	
76	0	0	0	0	
75	1	1	0	0	
74	0	1	0	0	
73	0	1	0	1	
72	0	0	1	0	
71	0	1	0	0	
70	0	0	0	0	
69	1	1	0	0	
68	0	3	0	2	
67	1	1	1	0	
66	0	1	0	0	
65	0	3	0	0	
64	0	2	0	0	
63	1	4	2	0	
62	0	4	0	1	
61	0	3	0	0	
60	0	3	0	0	
59	0	5	0	2	
58	1	6	0	2	
57	1	16	0	1	
56	1	9	0	2	
55	1	13	1	4	
54	1	8	2	1	
53	3	21	3	1	
52	1	15	1	4	
51	2	30	1	6	
50	1	19	2	4	
49	4	21	6	9	
48	7	21	1	10	
47	8	19	5	11	
46	5	22	7	9	
45	5	22	6	19	
44	11	18	7	17	
43	11	20	7	22	
42	8	12	11	21	
41	21	9	13	22	
40	20	8	8	26	
39	21	6	14	19	
38	15	5	16	24	
37	19	6	21	29	
36	25	5	29	21	
35	30	4	35	17	
34	20	0	21	19	
33	36	4	28	18	
≤ 32	101	10	134	39	
Average of Building Means*	36.83	48.63	35.09	40.18	
Standard Deviation of Building Means*	7.20	7.96	7.64	7.12	

* These means and standard deviations are figured on the distribution of rounded building means. State averages in other sections of this report are figured on the distribution of student scores.

Table A4
Reading Assessment Scores - Grade 3
Building Frequency Distributions

Percent Correct Score	Number of Buildings: Narrative	Expository	Total Reading Index Score
≥80	36 Standard of Excellence	42	29
79	8	10	8
78	7	10	11
77	11	23 Standard of Excellence	15 Standard of Excellence
76	17	14	12
75	13	37	24
74	17	27	25
73	20	35	30
72	30	39	26
71	34	57	49
70	24	41	38
69	51	38	39
68	40	54	50
67	42	41	55
66	43	41	44
65	60	46	52
64	48	41	42
63	49	43	48
62	40	34	43
61	40	45	41
60	51	26	40
59	29	26	32
58	31	20	29
57	21	15	12
56	18	16	12
55	16	11	13
54	16	4	14
53	7	14	17
52	15	10	10
51	9	5	5
50	14	8	3
49	7	4	3
48	3	2	4
47	3	11	5
46	10	2	3
45	4	1	6
≤44	19	10	14
Average of Building Means*	64.13	66.40	65.24
Standard Deviation of Building Means*	8.70	8.29	8.10

* These means and standard deviations are figured on the distribution of rounded building means. State averages in other sections of this report are figured on the distribution of student scores.

Table A5
Reading Assessment Scores - Grade 7
Building Frequency Distributions

Percent Correct Score	Number of Buildings: Narrative	Expository	Total Reading Index Score
≥92	0	0	0
91	1	0	0
90	0	0	1
89	0	2	0
88	0	1	0
87	0	1	0
86	1	1	0
85	0	0	1
84	1 Standard of Excellence	0	0
83	1	2	1
82	0	3	2
81	0	2 Standard of Excellence	0 Standard of Excellence
80	1	3	2
79	0	8	2
78	4	4	1
77	1	7	1
76	4	10	7
75	6	17	6
74	4	16	16
73	14	23	16
72	10	27	20
71	20	22	23
70	21	27	34
69	30	29	38
68	43	35	32
67	41	24	34
66	38	25	36
65	37	26	35
64	46	19	29
63	39	25	31
62	29	25	23
61	13	19	22
60	17	18	16
59	16	11	14
58	22	8	13
57	8	9	10
56	6	16	6
55	8	5	6
54	3	6	4
53	3	3	1
52	2	1	3
51	2	4	0
50	1	4	6
49	3	2	0
≤ 48	9	15	13
Average of Building Means*	64.73	66.06	65.39
Standard Deviation of Building Means*	6.59	8.52	7.05

* These means and standard deviations are figured on the distribution of building means. State averages in other sections of this report are figured on the distribution of student scores.

Table A6
Reading Assessment Scores - Grade 10
Building Frequency Distributions

Percent Correct Score	Number of Buildings: Narrative	Expository	Total Reading Index
≥ 84	0 Standard of Excellence	0	0
83	0	0	0
82	1	0	0
81	1	0 Standard of Excellence	0 Standard of Excellence
80	0	0	0
79	0	0	0
78	0	0	0
77	3	2	1
76	3	0	1
75	7	2	2
74	7	3	1
73	15	2	3
72	22	1	3
71	34	2	6
70	36	7	15
69	37	12	13
68	41	5	28
67	45	6	33
66	23	15	30
65	30	16	30
64	13	19	33
63	13	25	37
62	12	23	29
61	10	30	22
60	9	27	18
59	2	25	19
58	3	20	12
57	0	16	11
56	4	22	3
55	0	22	7
54	1	13	2
53	1	8	4
52	3	11	4
51	0	8	0
50	0	7	0
49	1	7	0
≤ 48	5	26	15
Average of Building Means*	67.23	58.86	63.02
Standard Deviation of Building Means*	5.41	7.44	5.93

* These means and standard deviations are figured on the distribution of rounded building means. State averages in other sections of this report are figured on the distribution of student scores.

Appendix B

Assessment Descriptions

Mathematics

The Kansas Mathematics Assessment at each grade level (4,7, and 10) reports scores for three cognitive or mathematical process areas and a Total Power Score. These are reported in terms of percent correct. The percent correct of each process score is derived from two multiple mark items (one or more correct responses) worth a maximum of two points each and ten multiple-choice item (one correct response) worth one point each. As a result each process score is based on a total of 14 points. The Total Power Score is an average of those three process subscales.

As was described in previous assessment reports, the 1993 Kansas Mathematics Curriculum Standards call for an increased emphasis in the content areas of number sense, algebraic concepts such as patterns, equations, functions, and relationships, geometry and spatial sense, probability and statistics, and processes of Communication, Reasoning and Problem Solving using these content areas along with a decreased emphasis on paper/pencil computational skills.

The structure of the Kansas Mathematics Assessment may be better understood if one thinks of a three-dimensional matrix: content area x cognitive (or process) area x question format. In other words, each question is a combination of subject matter from one or more content areas

(1) number sense and number systems,
(2) algebraic concepts,
(3) geometry and spatial sense, and
(4) probability and statistics; skills from one or more cognitive or process areas (Problem Solving, Mathematical Reasoning, or Communication)

and a question format (multiple choice or multiple mark).

However, in keeping with the spirit of the Curriculum Standards, questions are categorized according to cognitive or process areas, not content area. A breakdown of content performance is not included in this report.

There are several cognitive or process areas identified in the 1993 Kansas Mathematics Curriculum Standards, only three of which were assessed this year. The three cognitive or process scores are averaged to form the Total Power Score. The definitions of the three process skill areas follow.

Cognitive Skill Areas

Cognitive or Process Skill	Definition
Problem Solving	Problem Solving includes routine and nonroutine problems with relevant and authentic problem situations where there is an absence of an apparent or automatic solution strategy. The emphasis is on utilization of routine and nonroutine Problem Solving strategies or one's approach to a solution.
Mathematical Reasoning	Reasoning is the facility to incorporate selective judgment into a solution. Such mathematical problems require the student to make an inference from what is presented and to integrate basic mathematical understandings when producing a solution.
Communication	Communication is the integration of information from fields that can be approached, understood, or presented mathematically. It involves the skills needed to interpret, express, or form quantitative conclusions that are shared with others.

For additional information on the standards which are assessed, please refer to pages 5 - 23 of the Kansas Mathematics Curriculum Standards 1993.

Reading

One of the primary purposes of the reading component of the Kansas Assessments is to give information on the effectiveness of instructional programs and the level of reading comprehension skills of students at the grade levels tested. Silent reading comprehension is the major focus of the tests; reading "subscales," such as decoding, word recognition, or vocabulary knowledge are needed within silent reading comprehension.

Narrative texts, which tell stories, and Expository texts, which present information, were chosen as the two text types to be used. Full-length authentic texts from the two text types formed the basis of the reading tests at Grades 3, 7, and 10. "Authentic" texts are those that occur in literature and textbooks for students or adults. They are not composed specifically for use in a test, nor are they edited or changed for use in a test.

One Narrative and one Expository text were used at each grade level. School librarians and classroom teachers representing elementary, middle/junior high, and senior high submitted a large number of texts for consideration. Panels of educators (K-12 and higher education) rated them for interest level and appropriateness of length, difficulty, and content. The test-writing team composed of university staff and classroom teachers then chose the texts based upon the information from those panels.

Questioning was based primarily on the importance of information in the text. In Expository selections importance was identified through conceptual mapping of the text. In Narrative selections importance was identified through a goal structure mapping of the text. A description of causal chain theory and conceptual mapping follow.

Identification of Important Content

Causal Chain Theory for Narratives

Causal chain theory is based on research by Tom Trabasso, University of Chicago, and others in the field of causal chain research.

Stories may be divided into units (propositions) that correspond to a simple sentence or clause. Understanding a story requires that those units be related to one another in some coherent fashion. Therefore, the relationships between units, or events, must be detected or inferred by the reader.

The principle of transitivity allows the construction of the causal event chain of a story. If Event A is causally related to Event B and Event B is causally related to Event C, then Events A and C are causally related by the principle of transitivity. The events in a story that are causally related to one another can thus be" chained" to one another to form the causal sequence that makes up the important content of the story. Elements of causality need not follow a temporal sequence within the selection, e.g., flashbacks.

Structurally, a Narrative is made up of a Setting and Episode(s). The setting identifies the main character and presents the circumstances in which the story occurs. It is followed by one or more Episodes. Episodes are made up of units that function as Goals, Attempts, Outcomes, and Reactions. Goals are the aims or desires of the character; Attempts are actions taken to reach the Goal; Outcomes are the results of actions taken; and Reactions are feelings, thoughts, or actions that follow the Outcome.

In the causal chain of a story, some propositions may have causal relations not only with those that immediately follow them, but also with others that occur later. In particular, a Goal may continue to be causally related to any number of subsequent events so long as it is not fulfilled. Thus, certain events have many connections with other events, while others have few. Such connectivity makes an event more important in understanding a story. Thus, the important units, or events, in a story may be identified by studying the function of an event in an Episode, its inclusion in the causal event chain, and its connectivity with other events.

For the construction of test items for Narrative text, stories were first divided into units or propositions and the function of each in the story was identified. Since all of the stories used were complex stories made up of many Episodes, the episodic structure of the story was then identified. A simplified causal chain which portrayed the most important Goals, Attempts, and Outcomes of each Episode was constructed.

A "Why" question was then written about each Goal and Attempt statement in the goal structure map. Asking a continuing series of "Why" questions causes the reader to weave a causal chain of events that connects the story into a whole. It requires the reader to make a continuing series of inferences. To summarize, as a result of focusing on causal chains, the questions that emerge evaluate the most critical and central elements of the selection.

Mapping the Structure of Expository Selections

An author selects one or more text structures to help express the purpose of the writing. Structure is revealed through subdivisions and headings in the text to some extent, but some of the structure is implicit. The task of the reader is to be able to discern that structure to detect the important information in the writing given the reader's purpose. A hierarchical concept map which depicted the major structural characteristics of the test was devised for each Expository text used in the Kansas Reading Assessment. The top level ideas were presented in the upper levels of the map, while the lesser structures and concepts were presented at lower levels in the map.

Test questions were written to tap the major structural elements and the upper level concepts in the Expository text. Panels of educators (K-12 and higher education) helped to construct the maps of the Expository texts and suggested questions that could be used to reflect the important elements in them. The following describes the rationale and how test items were constructed from concept maps.

Rationale for Test Question Formulation

Questions may be answered from information presented in the text, from information stored in the head of the reader, or from a combination of the two. The following classifications come from the current theory and thinking regarding reading comprehension.

-- Textually-Explicit Questions (TE). The answer to a question is stated directly in the text.
-- Textually-Implicit Questions (TI). The answer to the question posed is stated in different places in the text. The reader must search and weave ideas together.
-- Scriptally-Implicit Questions (SI). The answer to the question asked must come from the mind of the reader, but it is directly related to the interpretation in the text.
-- Textually-Scriptally-Implicit Questions (TSI). The reader must search for sources both within the text and within his/her prior knowledge and weave ideas from both sources together.

Most of the questions about Narratives were TI questions because they require weaving together units in the causal chain of the story. Most of the questions for the Expository selections were TE or TI questions. An effort was made to include as many TI questions as possible without disregarding the "importance criterion."

Appendix C

Exemplar Items

Mathematics

Grade 4

1. What is the place value of the 5 in the numeral 8.561?

   A) ones
   B) tens
   C) hundreds
   D) thousands

2. Chris' father packed a piece of fruit in her school lunch. She remembers that in the fruit bowl there were 2 apples and an orange. What is the probability that Chris will have an orange in her lunch sack?

   A) one chance out of three
   B) two chances out of three
   C) one chance out of two
   D) two chances out of two

Grade 7

3. When adding integers having the same sign, what should be done?

   A) Add the absolute values and keep the same sign.
   B) Subtract the absolute values and keep the sign of the number with the largest absolute value.
   C) Add the numbers and ignore the sign.
   D) Subtract the numbers and ignore the sign.
   E) Add the numbers and take the opposite sign.

Grade 10

4. Sandwiches in the school cafeteria are 4 inches square and 1 inch thick. Which size bag will hold the sandwich and be most sensible to use?

   A) 4 inches x 4 inches
   B) 5 inches x 5 inches
   C) 6 inches x 4 inches
   D) 6 inches x 6 inches
   E) 7 inches x 6 inches

5. A poll of the president's domestic policies asked people to rate the president on a 10-point scale. Ratings were almost normally distributed, with a mean rating of 6.5. Twenty percent of the people rated the president a 5 or a 6. Based on this information, which other ratings can you predict were given the president by 20 percent of the people?

   A) ratings of 2 or 3
   B) ratings of 3 or 4
   C) ratings of 6 or 7
   D) ratings of 7 or 8
   E) ratings of 8 or 9
   F) I don't know

Reading

Grade 10

Students are given a complete copy of the story, "One Friday Morning" by author Langston Hughes. After reading the selection, they are asked questions as illustrated below.

Sample Test Questions from: "One Friday Morning"

Mark one or more than one answer to each question 1 through 5.

1. Why did Miss O'Shay tell Nancy Lee that she had won the scholarship?

   A) She wanted to help Nancy Lee finalize her plans to go to art school.
   B) She wanted Nancy Lee to have time to prepare her acceptance speech in advance.
   C) She wanted to see the expression on Nancy Lee's face when she heard the news.
   D) She was very proud of Miss Dietrich and Nancy Lee.
   E) She didn't want Nancy Lee to be stunned when the award was announced.

2. Why did Nancy Lee put the Black woman, spring, and the flag in her picture?

   A) She wanted to show her dream that there was hope for Black people in America.
   B) She knew how to make a picture look light and airy.
   C) She wanted to show that she was proud to be Black and proud to be an American.
   D) She had to draw a picture of a person and chose her grandmother as the subject.
   E) She had read the story of the making of the flag.

3. Why did Nancy Lee plan to accept the award for her race as well as for herself?

   A) Miss Dietrich expected her to make such a speech.
   B) African American people of her city were sometimes treated unfairly.
   C) She wanted to let them know that an achievement like hers was possible for other African Americans.
   D) She and her parents had just come out of the South.
   E) She was proud to be an African American.

4. Why was Nancy Lee determined that what had happened to her would not happen to others?

   A) She was tired of discrimination against women.
   B) She believed in liberty and justice for all.
   C) She needed the scholarship in order to attend art school.
   D) She did not want anyone to see that she was hurt or embarrassed.
   E) She was inspired by Miss O'Shay's refusal to accept what had happened.

5. What aspect of Kansas culture is reflected in this story?

   A) the Star Spangled Banner
   B) the Kansas state song, "Home on the Range"
   C) the phrase "bleeding Kansas" from the Civil War
   D) the Kansas motto, "To the Stars Through Difficulty"

Kansas State Board of Education
Adopted 2/99

Education Priorities for a New Century

The Kansas State Board of Education is charged with the general supervision of public education and other educational interests in the state. While clearly acknowledging the role and importance of local control, the State Board of Education has the responsibility to provide direction and leadership for the supervision of all state educational institutions under its jurisdiction.

With this in mind the Board has adopted the following mission:

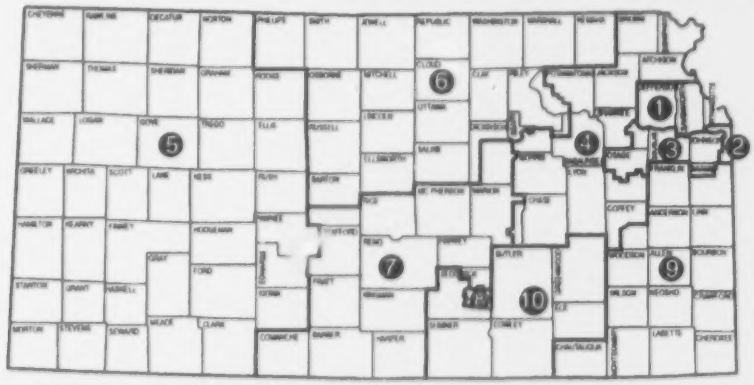
The Kansas State Board of Education promotes student academic achievement by providing educational vision, leadership, opportunity, accountability, and advocacy for all.

The Board believes that focusing on this mission will lead to an educational system which is embodied in the following vision statement:

Schools will work with families and communities to prepare each student with the living, learning, and working skills and values necessary for caring, productive, and fulfilling participation in our changing society.

To this end the State Board has established the following priorities to guide its work to begin a new century:

- **Improve teaching in Kansas schools utilizing performance measurement for teachers and creative approaches to effective teacher recruitment, preparation, and development.**
- **Raise the achievement of students with an emphasis on low achievers to acquire basic academic skills.**
- **Continuously improve state curriculum standards and assessments.**
- **Address the needs created by changing enrollment trends.**
- **Ensure that students read at the appropriate level, including diagnosis of skills and the use of effective interventions.**
- **Ready children to learn by supporting families with quality early childhood and primary programs.**



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